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ABSTRACT

Issues pertaining to equity rights to intellectual property and policy concerns of colleges are discussed. The following factors need to be addressed: the extent to which the intellectual property is created and/or reduced to practice during time paid for by the institution; the extent of use and value of facilities provided by the institution and access to facilities to employees at no cost or obligation; the contribution of institutional materials and supplies to the creation of intellectual property; the relationship of the intellectual property to college work; and the role of the college in the development or marketing of an intellectual property created by an employee. The following issues that should be considered in the development of intellectual property policies are identified: determination of individual participation (e.g., colleagues, students); the institutional role; consideration of the general public, which provides direct or indirect financial support; legal questions, development and marketing; academic freedom; and the comprehensiveness and consistency of the policy. A policy of institutional ownership of intellectual property produced with institutional resources is advocated, and the merits of income sharing are identified. Attention is also directed to relevant new federal legislation. (SW)

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Intellectual Property: Developing an Equitable Policy

by ROBERT H. LINNELL

Intellectual properties—those creations of the human mind that may be owned—encompass ideas that are patentable, written and other works that are copyrightable, and artistic creations with market value for whatever reasons. Modern societies have recognized that individuals who create intellectual properties should have ownership rights (e.g., the U.S. Constitution, Article I, Section 8), including sharing in the financial rewards of those creations. Society has also generally accepted the idea that individuals may assign or otherwise give away their intellectual property rights in exchange for something they value such as a specific fee, a salaried position, or any of a diversity of contractual arrangements involving fees, salaries, royalties, etc. However, questions as to whether current statutes adequately protect both the public interest and the rights of the creators of intellectual property continue to be debated.

Intellectual Properties and The Institution

The academy places a very high value on recruiting and supporting creative people and intellectual property rights are of special significance. Although many universities have policies that deal with inventions and patents, the electronic revolution in communications and information management and new U.S. copyright and patent laws have rendered obsolete many institutional property rights policies developed in the past. There is also a lack of adequate policy or procedure to deal with the complex issues in the copyright of creative arts, computer products (data bases, software), and educational tools. In some of the latter areas, many institutions have developed no policies at all.

Difficult questions need to be answered in apportioning equity rights to intellectual property, questions of weighting contributive factors essential to the creation of the particular intellectual property. These factors can be categorized as follows:

1. *Personnel time and responsibilities.* To what extent, if any, was the intellectual property created and/or reduced to practice during time paid for by the institution? This is a particularly difficult question, since faculty members generally have no defined work hours and full-time effort is rarely, if ever, specified. Although faculty responsibilities—to be met "on the clock"—usually include research or scholarly and creative work, there is no requirement that any of these creative activities should yield practical, potentially income-producing results. In fact, there is strong feeling that the intellectual properties most valuable in the institutional reward system are those that are "pure" or "basic" and these will frequently be of little direct commercial value. Thus it can be argued that the primary faculty reward for commercially valuable intellectual property is the personal income it generates since little or no institutional reward may be forthcoming. This analysis suggests that a change in institutional faculty reward policy should be considered.

Staff are paid salaries for regular hours of work and usually have assigned responsibilities. However, increasing numbers of professional staff (many with earned doctorates) are taking on faculty duties, especially in research, though they hold nontenure track positions. It is difficult to determine if the intellectual properties created by these nonfaculty professionals were created during time paid for by the institution or if they were related to assigned responsibilities. For students, the question is more complex: There are two different situations that may merit different equity rights: (a) students who are paid university employees, and (b) students who are tuition-paying participants. Some students may belong in both categories.

2. *Facilities.* Colleges and universities provide an expensive array of facilities essential to teaching and scholarship: computers, software, and terminals; libraries and information retrieval systems; laboratories, equipment, and lab technicians; offices and secretaries or word processing centers; and other assistance. One or more of these facilities generally are essential in the creation, and/or reduction to practice, of intellectual property by institutional personnel. It is usually relatively easy to determine which institutional facilities, if any, were used in the creation of a given intellectual property. What is more difficult to determine is the extent of use and its value. Another question is which facilities, if any, should be provided to employees at no cost or obligation.

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3. *Materials, supplies, and miscellaneous contributions.* Many supplies are almost taken for granted (paper, pencils, pens, stamps, copy machines, etc.) though inflation and inadequate budgets are forcing increased accountability. Telephone charges, travel, and attendance at professional meetings are often paid by the institution in the name of professional development. Other materials provided include consumables such as art supplies, chemicals, and reagents. Most institutions have rather liberal policies and permit limited use of these resources for personal/professional use. Many intellectual properties developed by institutional employees require, to some degree, the use of one or more of such resources.

4. *Relationship to other work.* The relationship of the intellectual property to college or university work is very important. Does it relate (a) to the general field of the creator's academic work, (b) to sponsored research or scholarship funded by the institution, by public funds, by private foundations, or by industry, (c) to outside consultantships, (d) to student research projects, or (e) to teaching assignments?

5. *Development and marketing.* Does the institution play any role in the development or marketing of an intellectual property created by an employee of the institution, even if only the university name is used in a particular marketing situation? Suggestions in the American Council on Education "Memorandum on Revised U.S. Policy on Title to Patents of Inventions Made by Universities with Federal Funds" are useful in this context.

Simple and Complex Cases

These five problem areas suggest the complexities of the issues surrounding ownership of intellectual property and the determination of equities in any income that may be derived from them. There is only one question to which there is almost universal agreement: If the intellectual property is not related to the creator's professional work at the college or university, and involves no institutional paid time, facilities, materials, or institutional marketing, then it clearly belongs entirely to its creator. (Some states have specific legislation relating to intellectual property. For example, the California labor code forbids employers from requiring employees to assign *non-job-related* inventions to the employer.) Not quite so clear is the equity, if any, due the creator(s) of intellectual property in cases where the creative work was done during fully paid institutional time using major institutional resources and while the creator(s) was working on assigned institutional projects.

However, most intellectual properties created by institutional employees involve complex interactions of institutional and personal resources, as well as external interactions in consultantships, professional meetings, and the like. Here lie the problems in sorting out and distributing equities.

Traditionally, the academic community has been very supportive and protective of the intellectual property rights of its employees and in particular of its faculty. In an earlier era, communications through electronic mass media were not available and multibillion dollar sponsored research programs were not yet here. Intellectual commerce was more genteel. Professors wrote textbooks with some modest help from institutional resources and there seemed no reason to question that full ownership and royalties were vested in the faculty member. To avoid the appearance of conflict of interest the most discreet faculty textbook authors sold copies of their texts on their home campus at a discount equal to their royalty or, alternatively, royalties derived from their own campus were donated to a scholarship or support fund.

Similarly, some faculty inventors produced major financial benefits for their institution. Frederick Gardner Cottrell invented electrostatic equipment valuable in control of air pollution while he was a young chemistry professor at the University of California-Berkeley. When the University of California, the American Chemical Society, and the Smithsonian Institution all declined to develop this invention, Cottrell founded Research Corporation. Research Corporation not only developed Cottrell's electrostatic patents, but acquires and markets patents for many university scientists, using the income to make grants for the further support of basic scientific research. Another outstanding example was the invention of the vitamin D irradiation process by Harry Steenbock, in 1924, at the University of Wisconsin. Since the university had no administrative mechanism for handling this invention, a group of Wisconsin alumni with business experience founded the Wisconsin Alumni Research Foundation (WARF) as an autonomous organization. WARF has been successful in investing its income from the Steenbock invention and several other inventions, and currently provides some $5 million annually for support of basic research and research facilities at the University of Wisconsin.

Institutional Policies and Practices

Many institutions have established policies for dealing with at least some intellectual properties. Specific management offices and formal procedures for handling patents have received the most attention, though faculty inventions generally have not yielded substantial income to universities. A survey by the Society of University Patent Administrators (SUPA) of 79 research universities and their patents issued from 1969 to 1975 yielded responses from 29 institutions on 498 patents; only 5 percent of these patents had generated income between $10,000 and $100,000.

There are several reasons for this lack of major success. Faculty have not been very interested in commercial development of their ideas, and the institution's academic reward system generally does not encourage applied work. Developing a useful patent normally requires a good deal of work beyond the basic research stage. Government funding is involved in much institutional research, and the previous lack of a clear, consistent, and supportive government policy has muddled "ownership" questions. The uniform federal patent legislation of December 1980 (P.L. 96-517) generally gives universities (as well as other nonprofit organizations and small business firms) the right to elect to retain title to inventions made with support of federal funding. This legislation has the potential to radically increase the importance of patents at universities.

Research university patent policy is usually authorized by trustees or regents, and administered by a research administration office, a vice president or dean of research, or by a foundation. Most research institutions have patent committees of faculty and administrators or faculty alone. Patent policies of these institutions generally cover faculty, professional and nonprofessional staff, and students employed by the university. The institution usually takes title to the invention or directs or approves disposition by the inventor. Although many institutions have agreements

with all possible inventors, some institutions have agreements only with inventors they employ, others have agreements with employees only on sponsored research and a few have no agreements.

Most institutions claim equity in an invention based on either the payment of salary or provision of funds and facilities, or both. Sharing of royalty income with college or university inventors is almost universal, in sharp contrast to the usual industrial employee-inventor agreement in which industrial inventors sign property rights over to their employers as part of their employment agreement, usually with no monetary reward other than salary improvement for superior performance. At the college or university, royalty sharing is sometimes based on gross royalties and sometimes on net income, starting as high as 80 percent to the inventor and scaling down, as the total income increases, to a low of 15 percent. In a 1977 SUPA survey, the median inventor share was about 35 percent of net royalty.

The institutional inventor's share of royalties seems to be increasing and the use of a sliding scale—that is, decreasing percentage of royalty to the inventor as total income grows—is also increasing. Institutions are also specifying the disposition of their patent income, with the largest share going to research support at the institution.

New Federal Legislation

Effective July 1, 1981, new federal legislation (P.L. 96-517) set fees, provided for patent reexamination, explicitly extended copyright protection to computer programs, and established a uniform policy for giving nonprofit organizations and small business firms rights to the inventions they make in the course of research funded by government. Colleges and universities can now make patent application and licensing agreements on federally funded projects without obtaining government permission case by case. The only requirements are that the nonprofit institution (1) disclose inventions to the funding agency, (2) file a patent application within a "reasonable" time, and (3) grant the government a royalty-free license. The funding agency may require periodic reporting on utilization efforts and the invention rights may not be reassigned (except for patent management purposes) without special agency approval.

Other restrictions are a limitation on granting of exclusive licenses for a time in excess of five years from first sale or eight years from the date of the license (excepting time of delay because of the regulatory agency approval process). In certain circumstances government can demand licensing (or take ownership) where practical application has not been adequately achieved. The law mandates that royalties be shared with inventors (no sharing formula is suggested) and net royalty income, after expenses and royalty distribution to inventors, must be used for support of scientific research or education. With the reasonable and simple regulations that have been developed for implementing this legislation (that is, OMB Circular 124), the potential impact from the large federal funding levels could be considerable.

New Policy Needs

The principal roles of the academy —discovery of new knowledge and creation of new art forms, transmission of knowledge, and public service—combine to create an environment that could be highly productive in the conception and development of intellectual properties. Potential public benefits include stimulation of the economy and increased productivity, enhanced national defense, creation of useful software and data bases, contributions to culture, creative uses of leisure time, and an improved quality of life. However, institutions of higher education generally fall short of their potential in making these contributions to society. A comprehensive and thoughtful development of an intellectual property policy could enhance institutional participation in the achievement of these goals.

Goals

Teaching and basic scholarship are universally accepted institutional and individual academic goals, but public service roles involving problem solving and applications of knowledge have lower priority. Applications-oriented research, consulting, creation of intellectual properties, continuing education, and a variety of other public service roles all receive less institutional recognition. These ancillary activities frequently have been individual professional, supplemental work engaged in primarily for additional financial reward. This situation has arisen largely because of a lack of institutional reward for such activities.

In view of the new federal patent legislation and implementing regulations, rapidly changing technology, and the need to translate academic expertise into public service, institutions need to change their current intellectual property policies. The increasingly costly institutional investments in computer technology, libraries, TV centers, laboratories, and equipment are creating major financial strains that might be met, at least in part, by income from commercial applications that stem from academic work. Specifically, policies need to treat the following questions:

1. *Ethical, legal, and financial.* The policy must meet the ethical criteria of fairness and equity to all participants and it must be in accord with federal and state law.

a. *Creator(s) of intellectual property.* It should be recognized that without creator(s) there would be no intellectual property, but the role of colleagues, students, staff, and others needs to be given proper credit. Careful, factual determination of individual participation is essential. Conflict-of-interest situations must be recognized and dealt with.

b. *Institutional role.* Salaried positions and paid-for time to do creative work, supported by computers, libraries, laboratories, etc., are important if not essential contributions.

c. *General public.* All institutions of higher education derive considerable financial support from the general public, directly or indirectly. Institutions of higher education enjoy many tax advantages, including that of receiving tax-deductible gifts; these indirect public subsidies are of great importance. Local, state, and federal direct appropriations, student aid, and grants and contracts provide significant support—in some cases the largest item in the institutional budget. The public expects a return on this large investment—in education, research, and public service. Public interest groups want to be assured that the public obtains its fair share of benefits from this investment; intellectual property rights can be an important area at issue.

d. *Legal issues.* The intellectual property rights of faculty and all other employees, including nonpaid project assistants, should be explicitly described in an agreement with the institution defining ownership and royalty rights. The new patent and trademark amendments act speci-

ficially provides copyright protection for computer software (including data bases and computer-assisted instruction), thus creating a need for institutional policy in this area. The Copyright Act of 1976 provides that the employer owns all of the rights contained in a copyright work (of an employee) *only* if it is a "work made for hire," that is, "a work prepared by an employee within the scope of his or her employment." These legal issues are generally not adequately addressed at most institutions of higher education, and they should be included in employment agreements and personnel policy handbooks.

e. *Development and marketing.* Financial returns can be achieved only if intellectual properties are marketed. Marketing requires investment of risk capital from investors who see a good opportunity for profit. Those who risk their capital require a potential return commensurate with the risk: otherwise they won't invest.

2. *Academic freedom.* Institutional policy relating to intellectual property rights should be supportive of academic freedom. Attention should be given to covert as well as to the more overt financial pressures. Individuals may be oblivious to these diverse, often subtle influences.

Faculty members frequently have overlapping property rights commitments—to their institutions, to federal agencies, and to industries for which they consult. The conflicting interests of these three supporting organizations make it difficult or impossible to preserve academic freedom while engaging in technology transfer useful to society. The first step in the solution of these problems is for faculty and administration to admit they exist and to work together openly to find solutions, recognizing also the interests of their students and of the general public.

3. *Comprehensive and consistent policy.* There is an increasing variety and value of intellectual properties conceived or created by faculty and other employees of higher education. An institutional policy should deal with *all* intellectual properties created by *all* people working for or at the institution. It should be comprehensive, consistent, and well-publicized to all employees, students, and any others who may be working at the institution.

To implement this proposal, institutions of higher education should establish an Office of Intellectual Property Management (OIPM). This office would incorporate existing patent management functions and copyright responsibilities, and centralize all intellectual property management functions such as those by media centers, colleges of continuing education, and others. Because of its potential future impact on the institution, the development of an OIPM should be guided by significant recommendations from faculty, staff, students, administration (academic and nonacademic), and legal counsel. Under the guidance of an appropriate committee the OIPM should develop and implement policy and procedures for all conceivable types of intellectual properties that might be created at or by the institution with some use of institutional resources. It would strive to be comprehensive and consistent in its treatment, noting its inconsistencies and areas of omission are purposeful and not due to lack of foresight. The OIPM would also monitor the operation and effectiveness of policy and have responsibility for suggesting change and improvement. The OIPM would secure patents and copyrights, develop and market them, and administer income according to an agreed policy.

A primary goal of the OIPM would be to provide policy to minimize or avoid the potential for conflict of interest arising should the free exchange of ideas be limited by any possible commercial value of intellectual property. A secondary goal would be to bring results of institutional research to the service of society as soon as is prudent.

A third goal would be to return earnings to the institution for investment in additional scholarship that might, in turn, lead to further practical benefits. The possibility of large earnings could be tempting to professors and to institutions, but it could undermine the freedom to discuss work openly, a basic academic premise. Donald Kennedy, president of Stanford University, has stated the problem very succinctly: "One casualty surely is the accessibility of a large body of significant work to young investigators and graduate students. . . . Perhaps even more important, the fragile network of informal communication that characterizes every especially active field is liable to rupture. To a considerable degree," he told the Stanford faculty in 1981, "whether the rules remain adequate to guide us over the more complicated terrain in which we suddenly find ourselves . . . will be decided by the restraint shown by faculty members in the kinds of arrangements they adopt in response to the extraordinary array of overtures they are now receiving."

The proposed OIPM would have a continuing and difficult assignment. It seems an unreasonable behavioral expectation for all faculty in a large university to exercise the kind of restraint called for by Stanford's Kennedy. The public today is very skeptical of the idea that any professional group can regulate itself, without a self-interest inimical to the public interest. At the other extreme, excessive rules generally prove counterproductive, causing more problems than they solve.

Ownership of Intellectual Properties

Although many institutions currently have employment contracts that specify institutional ownership of all patents related to college or university work, these policies have not generally been developed for all institutional employees nor for other forms of intellectual property developed with university assistance.

Traditionally, textbooks and closely related teaching materials have belonged to authors, though it would be unusual for such materials to be produced without use of some institutional resources. To suggest changing traditional textbook ownership rights would be controversial, but some changes seem desirable, if not essential, if the institution is to meet the challenges of the new information/education society and the potentials of the high-technology, electronics media revolution.

Ownership of all intellectual properties produced with some institutional resources or related to institutional work should generally be assigned to the institution. Incomes should generally be assigned to the institution. Income should be shared appropriately to recognize the contributions of the creators, institutions, sponsors, and the public.

This conclusion is based on several premises, the first of which is the assumption that institutional ownership of intellectual properties will help to separate intellectual and time commitment to production of intellectual property from the goal of making money. Most faculty members have multiple scholarly and educational interests that could absorb much more than 100 percent of their time; the danger is always present that they will opt for those activities

with the potential for extra earnings rather than those of greatest interest or intellectual challenge. A second premise is that institutional ownership of all intellectual properties permits an openness that could be monitored by an institutional committee, while personal ownership is private and often secret. Academic freedom and open communication among scholars and students would benefit from the absence of potentially self-serving restrictions of private ownership.

Third, with institutional ownership of properties, the institution can more effectively manage the properties, assuming time-consuming development and marketing chores for which many scholars may be ill-prepared. A fourth premise is that institutional ownership is a basis for a reward system consistent with institutional goals. At present, outstanding scholarly work (publications, creative art works, etc.) is usually recognized by promotion in rank, reward of tenure, and increases in the basic academic salary. However, the potential commercialization of intellectual properties is usually not recognized by the institutional reward structure, leaving the primary reward the possibility of personal financial gain. Thus, a basic scientific discovery, reported in the open literature, may yield high academic rewards, whereas the application of the discovery via a patent and development receives little academic recognition. Likewise a pioneer scholarly book provides professional recognition and academic rewards, but the rewards for an innovative textbook are primarily the royalties earned, thus skewing priorities toward personal financial gain rather than academic priorities.

Fifth, income from ownership of intellectual properties could be used for institutional assistance in the creation of such properties. Secretarial services, materials and supplies, computer time, use of equipment, involvement of students and technicians, and other institutional resources are valuable and frequently essential to successful intellectual property development. When the resulting properties are owned by individual persons, institutional resources may be used in violation of institutional policy, an unhealthy and undersirable situation that erodes the academic environment.

Income Sharing

Most major research institutions have established policy for patent income sharing, some based on gross or net income and/or gross or net royalties. Inventors' shares range from 80 percent to 15 percent, sometimes on a sliding scale that decreases the inventors' percentage as total royalties increase. (For example, MIT normally shares gross royalties with the inventors—35 percent of the first $50,000, 25 percent of the next $50,000, and 15 percent thereafter, provided the inventor's share does not exceed net royalties to MIT.) In the 1977 SUPA survey the average was 35 percent of the net to the inventor(s). Research Corporation pays 15 percent of new royalties to the inventor and 40 percent to the institution, with the balance going to its grants program. As shown earlier, the new federal law requires royalty sharing with inventor(s) but does not specify or even indicate guidelines for determining the percentage. The new law also mandates that the institution's royalty share, after expenses, be used for research or education. Currently most institutions split their share of royalty between the inventor's department and/or school and some central institutional function.

For copyrighted educational materials owned by the institution ("works for hire"), the creators are generally paid salary (on-load) to create a work that can then be used on the campus or for other nonincome-generating purposes with no additional payment to the author(s). If the work is sold or used for other income-generating and/or off-campus purposes, many agreements call for royalty payments to the authors. In the Flex-Ed program at the University of Southern California, instructors are paid a flat fee to produce the educational material (which is copyrighted and owned by the university), plus an additional fee for each student who takes the course. In computer-assisted-instruction (CAI), faculty creators of the software are generally paid to produce the program (on-load or overload) and may also receive additional fees related to the number of students who take the courses. In a mass-marketed CAI such as PLATO, the payments to authors can become substantial.

The same factors involved in developing and marketing intellectual property are relevant for income-sharing policy: personnel time (paid by institution) and responsibilites; institutional facilities used; materials, supplies, and other support provided by the institution; and development and marketing support. Another important set of issues is also essential to income sharing, namely, equitable determination of who the creator(s) of the intellectual property is (such as faculty, staff, or students), and the importance of the institutional and general public support roles.

The special tax-exempt and tax-supported status of academic institutions gives them an obligation to operate for the public good. It seems reasonable to guess that since employee assignment of job-related intellectual properties to employers is common—with little or no royalty sharing—the general public might expect something similar within academe.

During the years of debate prior to enactment of the new Patent and Trademark Law in December 1980, the major opposition was from public interest groups who argued that public funds should not be used to provide private profits. Undoubtedly these public interest groups will be waiting to see how this new legislation actually works and whether individuals appear to be deriving large profits through the investment of public funds. If this happens, there will probably be public pressure to change the law.

Some faculty investigators have given their intellectual property rights and/or income share to their institution, as was the case in the Stanford gene-splicing patent. Although this is commendable, the future public image and financial stability of academic institutions need more protection than that offered by the good will of faculty inventors. However, if the earnings from public-funded institutional research are used to support additional research and education, including funding of faculty salaries or providing full-time salaries by a shift from an academic-year to a calendar-year basis, a strong case could be presented that this is an investment for the public good.

Summary and Conclusion

Stated bluntly, money may corrupt even in academe, and large amounts of money will surely corrupt more than small amounts.

Though any proposal for income sharing may not satisfy everyone, a draft is useful in stimulating discussion and development of policy to meet the needs of specific institutions. If all university-related intellectual properties are owned by the institution, as recommended, income

sharing should be structured as follows:

Income from intellectual properties should be shared with the creator(s) of the intellectual property.

No one income-sharing formula will be adequate to meet the various types of situations that can arise.

In general, the income-sharing formula for the individual(s) should provide a large percentage when the total income is low and a decreasing percentage as the total income increases.

The institutional share of earnings should usually be much larger than that of the individual(s). Exceptions would be made only when the institution's contributions are clearly small compared to those of the individual(s) and the effect will not undermine academic principles.

The institutional reward system should explicitly recognize intellectual properties (including creative art works) as contributions that merit equal consideration with teaching and basic research. This consideration should not be tied to the amount of income earned, if any, but should follow the academic tradition based on quality and scholarly importance.

The institutional share of earnings from intellectual property should be used for education and research purposes.

Effective decoupling of intellectual and academic pursuits, including time commitments, from activities that have the potential for additional earnings, is an important objective. Therefore, the income-sharing policy and the formula that are used should limit the direct extra income for individuals. The institutional share should support not only scholarship and education, but also enhance the economic security of faculty and other employees. Academic-year appointments could be changed to full-time, 12-month appointments, funded in part by income from intellectual properties. Institutional payments of summer salary would enable faculty with these appointments to achieve parity with nonacademic colleagues. Institutional income from intellectual property could also be used to provide general support of research and education, including research initiation grants, secretarial support, computers, travel, student stipends, etc. While royalty income to institutions has not been very large in the past, in the future large income is a real possibility because of the new federal policy and the increasing use of educational material and electronic media. Undoubtedly the general public will be much more supportive of the institution if royalty funds support the institution rather than going to individuals as additional earnings. Royalty from educational sources requires special comment. The newer educational media, largely coming via the electronic revolution (CAI, TV, other audio-visual means) are a great challenge and opportunity for higher education. The ideas expressed here apply quite well to all of these new educational media.

Institutions must work out what sometimes will be complex details of these new intellectual property arrangements. If the college or university is to have meaningful academic freedom, open communications and a general environment conducive to new ideas are essential. In the longer time frame, income to the institution should add a considerable element of fiscal stability. These profit-sharing proposals are to be considered utopian only if one believes that the basic ideals of the academy are utopian. The author believes they are realistic and feasible. ♦

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